DETERMINING THE DIVERSITY OF FUNGAL SPECIES ASSOCIATED WITH A NATIVE WOODLAND HERB AND TESTING THE PATHOGENICITY OF *GLOMERELLA*

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The diversity of fungi associated with *Hydrophyllum appendiculatum*, an understory herb common in the Midwestern United States, was assessed. Fungal samples were isolated from roots, lower stems, and upper stems of healthy and wilted *H. appendiculatum* plants. Two nuclear genes were sequenced for each sample, and then compared to known sequences in GenBank using the BLAST search method. It was determined that there were at least eight different fungal species present. A comparison of the fungal species found in healthy and wilted plants will be presented. One of the fungal species associated with *H. appendiculatum* was *Glomerella*, a genus of soil-dwelling fungal pathogens that can infect many plant species. Other studies have shown that *Glomerella* causes stem lesions in a variety of host plants. To test whether *Glomerella* caused stem lesions or contributed to wilt disease in *H. appendiculatum*, plants were inoculated with one of three strains of *Glomerella*. Findings from the first inoculation experiment suggest that none of the tested *Glomerella* strains caused either stem lesions or wilt. A second inoculation experiment with a higher inoculation dose is undergoing to determine if exposure to higher inoculum concentrations may induce disease symptoms.